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# Flood Advice for Drinking Water Systems

*Water, Water, Everywhere!*

## Will your water system be prepared?

Floods are the most common and widespread of all natural disasters, except fire, according to the Federal Emergency Management Agency. Most communities have experienced some degree of flooding following heavy rain or spring and winter thaws.

Floods pose a particular threat to drinking water systems because floodwaters often contain biological and chemical contaminants that can make consumers sick.

These contaminants can end up at consumer taps if source waters or any parts of the water distribution system are flooded.

## Surface water sources

Heavy rain will change the quality of surface water forcing a utility to change its treatment plant operations and increase disinfection levels. This sometimes leads to taste and odor problems with the treated water.

## Groundwater sources

Contaminants can enter the water supply by flooding the wellhead or the immediate area around the wellhead.

## Distribution systems

Floodwater can enter the water distribution system if a significant loss of pressure occurs when all or part of the service area is flooded.



*The Skagit River inundates the town of Hamilton in October 2003. (Photo courtesy of Washington Emergency Management Division)*

## What to do if a flood is predicted for your area

- Have enough coliform sample bottles on hand to sample each well and the distribution system daily for at least a week.
- If you routinely disinfect your water system with chlorine, increase the chlorine level. Even though this will not ensure your drinking water will remain safe, it will make it easier to monitor chlorine residuals in your system. A drop in the chlorine residual can indicate contaminated water has entered your system.

## What to do if your well is flooded

- Advise residents to boil their drinking water for three minutes to kill disease-causing bacteria and parasites. Do this even if you chlorinate your water system because your treatment may not be effective against contaminated floodwaters.
- Collect coliform samples at your well and throughout the distribution system as soon as you are able to gain safe access. Exercise extreme caution any time an electric power supply component is under or near floodwater.
- Contact the Office of Drinking Water (ODW) anytime you advise customers to boil their water, or when water test results show coliform bacteria is present.

## What to do if your distribution system is flooded

- Monitor chlorine residuals and system pressure as soon as you can safely gain access to the system and its control facilities.
- If the system loses pressure at any time while the area is flooded, advise residents to boil their drinking water for three minutes to kill disease-causing bacteria and parasites. Collect coliform samples throughout the flooded area and let your customers know when the water is safe to drink.
- If you are monitoring chlorine levels and notice a drop in the residual while the area is flooded, advise residents to boil their drinking water. Collect coliform samples throughout the flooded area, especially in the area where chlorine is low.
- Even if you don't believe your system was flooded, plan to collect extra coliform samples.
- Contact the Office of Drinking Water (ODW) anytime you advise customers to boil their water, or when water test results show fecal coliform bacteria is present.

## Considerations for your customers

- Your customers' perception of risk during a flood may be high. They need timely and accurate information about the quality of their drinking water.
- Not all customers experience the same flooding conditions. Some may feel a direct threat from floodwaters while others do not. It's important to know your water quality and communicate to all customers.
- Be conservative and informative, not sorry later on! Make sure your customers have the information they need to make good decisions about their drinking water.

## Where to go for help

Visit ODW's Web site at [http://www.doh.wa.gov/ehp/dw/our\\_main\\_pages/dwflood.htm](http://www.doh.wa.gov/ehp/dw/our_main_pages/dwflood.htm) or call the nearest regional office:

**Eastern Region** – (509) 456-3115

**Northwest Region** – (253) 395-6750

**Southwest Region** – (360) 664-0768

**After hours and weekends** – (877) 481-4901



You can also call your local health or emergency management agency. Contact information is online at <http://www.access.wa.gov/government/index.aspx>